Texas Commission on Environmental Quality

Environmental Crimes Unit

CR-FY10-008
ATTACHMENT 3
DENIAL LETTER DATED 08/06/2010

→86173 10

Bryan W. Shaw, Ph.D., *Chairman*
Buddy Garcia, *Commissioner*
Carlos Rubinstein, *Commissioner*
Mark R. Vickery, P.G., *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

August 6, 2010

(b) (6), (b) (7)(C)
PRESIDENT
PORT ARTHUR CHEMICAL & ENVIRONMENTAL SERVICES LLC
PO BOX 218
PORT ARTHUR TX 77641-0218

RECEIVED
AUG 16 2010
TCEQ-Region 10
Beaumont

Re: Permits by Rule Registration Number: 86173
Port Arthur Chemical & Environmental Services
Port Arthur, Jefferson County
Regulated Entity Number: RN105156111
Customer Reference Number: CN603423427

Dear (b) (6), (b)

This is in response to your request to register the pending installation of the oil recovery process under Title 30 Texas Administrative Code § 106.183, 106.261, 106.472 (30 TAC § 106.183, 106.261, 106.472) at your facility in 2420 Gulfway Dr, Port Arthur, Jefferson County. The information submitted in support of your request has been evaluated and found to show that the installation of the process requires permitting review in accordance with 30 TAC Chapter 116.

The reasons for requiring a permit or permit amendment are described below:

As stated in 106.4 (b), no person shall circumvent the full permit process. You have submitted a permit application for facilities/operations which are already constructed and operating and this process should also be in that action. Additionally as stated in 106.4(c), the emissions from the facility shall comply with all rules and regulations of the commission and with the intent of the TCAA, including protection of health and property of the public, and all emissions control equipment shall be maintained in good condition and operated properly during operation of the facility. The number of complaints, confirmed nuisance conditions, poor compliance history, the unused but relied on control equipment, unregistered emissions, unregistered operations, insufficient supporting information for the emissions claimed, failure to meet certified emission representations and the failure to follow your certified operational representations does not meet 106.4(c).

There are numerous deficiencies for information related to your facilities and operations. Based upon previous operation of this equipment at your Houston site, there is still the outstanding concern of the raw oil containing sulfur compounds. As noted in the previous registration requests for this site, there is a substantial concern that mercaptans and hydrogen sulfide are being emitted from your existing facilities and these new operations. The presence of methyl and ethyl mercaptans or hydrogen sulfide requires a minimum 500' distance to the nearest receptor from the tank under 106.472 (9). Additionally you may review the TCEQ Storage Tank Construction Under Permit By Rule Memo dated September 1, 2006 available at: http://www.tceq.state.tx.us/assets/public/permitting/air/memos/tank_under_pbr06.pdf.

Re: Permits by Rule Registration Number

The presence of sulfur at a concentration of over 24 ppmv in the flow steam to the flare triggers a 1/4 mile distance requirement from the flare to the nearest recreational area or residence or other structure not occupied or used solely by the owner or operator. Based upon your represented distance from the flare or tanks to the nearest recreational area or residence or other structure not occupied or used solely by the owner or operator of the property, your PBR claim 86173/140921 and subsequent PBR claims including this claim which rely on the tanks and flare not containing or emitting sulfur compounds, will not meet the PBR requirements and a permit will be required.

You are reminded that the Texas Clean Air Act § 382.0518(a) and § 382.057, as codified in the Texas Health and Safety Code, requires that a construction permit be obtained or a permit by rule fully complied with before work is begun on the construction of a new facility or modification of an existing facility that may emit air contaminants.

Your cooperation in this matter is appreciated. If you need further information or have any questions, please contact (b) (6), (b) (7) P.E. at (b) (6), (b) (7) or write to the Texas Commission on Environmental Quality, Office of Permitting and Registration, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality.

Sincerely,

(b) (6), (b) (7)(C)

(b) (6), (b) (7) P.E., Director
Office of Permitting & Registration
Air Permits Division
Texas Commission on Environmental Quality

cc: Air Section Manager, Region 10 - Beaumont

Re: Permits by Rule Registration Number

bcc: (b) (6), (b) (7)(C) Attorney, Litigation Division, TCEQ Office of Legal Services
(b) (6), (b) (7)(C) Senior Attorney, Environmental Law Division, TCEQ Office of Legal Services
(b) (6), (b) (7) Permit Reviewer, Chemical Section, Air Permits Division
(b) (6), (b) (7) , Assistant Attorney General, Attorney General of Texas, P.O. Box 12548, Austin, Tx 78711-2548
(b) (6), (b) (7)(C) Assistant Attorney General, Attorney General of Texas, P.O. Box 12548, Austin, Tx 78711-2548
Project Number: 158011

TECHNICAL REVIEW: AIR PERMIT BY RULE

DEFICIENT

Permit No.:	86173	*Company Name:*	Port Arthur Chemical & Environmental Services, LLC	*APD Reviewer:*	(b) (6), (b) P.E.
Project No.:	158011	*Unit Name:*	Port Arthur Chemical & Environmental Services	*PBR No(s).:*	106.183, 106.261, 106.472

GENERAL INFORMATION			
Regulated Entity No.:	RN105156111	**Project Type:**	Permit by Rule Application
Customer Reference No.:	CN603423427	**Date Received by TCEQ:**	June 3, 2010
Account No.:		**Date Received by Reviewer:**	June 5, 2010
City/County:	Port Arthur, Jefferson County	**Physical Location:**	2420 Gulfway Dr

CONTACT INFORMATION					
Responsible Official/ Primary Contact Name and Title:	(b) (6), (b) President	**Phone No.:** **Fax No.:**	(b) (6), (b) (7)(C)	**Email:**	(b) (6), (b)@CESENVIRONMENTAL.COM
Technical Contact/ Consultant Name and Title:	(b) (6), (b) (7)(C)	**Phone No.:** **Fax No.:**	(b) (6), (b)	**Email:**	(b) (6), (b)@CESENVIRONMENTAL.COM

GENERAL RULES CHECK	YES	NO	COMMENTS
Is confidential information included in the application?		X	
Are there affected NSR or Title V permits for the project?	X		Pending NSR 86587
Is each PBR > 25/250 tpy?		X	
Are PBR sitewide emissions > 25/250 tpy?		X	
Are there permit limits on using PBRs at the site?		X	
Is PSD or Nonattainment netting required?		X	
Do NSPS, NESHAP, or MACT standards apply to this registration?		X	
Does NOx Cap and Trade apply to this registration?		X	Not a major source in Jefferson County.
Is the facility in compliance with all other applicable rules and regulations?		X	

DESCRIBE OVERALL PROCESS AT THE SITE

The existing site is operated under PBR 86173 (certified) for the production of sodium hydrosulfide (NaSH) and naphthenic acid. The company had a name change in November 2008. The previous name was CES Environmental Services Inc. The site has a permit application for proposed Permit 86587 submitted October 13, 2008 for processing aqueous caustic streams to produce an aqueous sodium hydrosulfide (NaSH) product stream out of two production lines. Each permit production train starts with a 45,000 gal horizontal tank serving as a reactor vessel (RV1 or RV2).

DESCRIBE PROJECT AND INVOLVED PROCESS

The company has submitted PBR certified paperwork for the oil recovery process but did not sign the PI-7_CERT. The feed material is received from off site via tanker truck and transferred to storage in any or all three 20,000 gallon horizontal tanks (OT-1, OT-2, and OT-3) prior to processing. The material is water containing some hydrocarbon distillate oil. Some solids may also be present. The material in these tanks may be allowed to phase separate during storage prior to processing. Since the concentration of the oil, water and solids is expected to vary, some degree of oil phase separation is anticipated. VOC emissions have been estimated based on a 100% oil concentration. The processing begins by transferring the feed stream to a 6,000 gallon horizontal tan} (OT-4) where it is heated to help facilitate phase separation during the centrifuge process. One 1.2 MMBtu/hr natural gas or LPG (propane) fired boiler is used to provide indirect process heat using steam or hot water. The heated feed stream is pumped into the enclosed centrifuge which uses differential surface rotation to separate the oil, water and solid phases into three discharge streams. The oil is discharged into a 450 gallon receiving vessel or tank compartment (QT-5) and the water is discharged to another equivalent size vessel or compartment (DT-6) for storage. The solids exit the centrifuge through a bottom opening and drop into a 3-cubic yard open-top hopper box. The recovered oil and wastewater are pumped to tanker trucks for shipment off-site. The solids hopper is loaded onto a truck and shipped off-site for disposal.

The company states that emissions from the oil recovery process are calculated based on several process steps. The feed stream contains varying amounts of water, oil and solids. The emissions were calculated based on a 100% oil concentration, except for the separated wastewater generated by the centrifuge. Emissions from wastewater storage and handling are based on an oil concentration of 10% by weight.

The company calculated the tank emissions using methods specified in AP-42 for vertical and horizontal vessels. PACES stated that it has the capability, and retains the option, to utilize vapor balancing or to route the storage tank vents to the existing facility flare, the storage loss emissions used as the basis for this PBR assume no controlled reduction efficiency.

The company states that the centrifuge operates with a continuous liquid feed. However, there may be a displacement of a small amount of vapor during the initial charge. Emissions from this initial charge were estimated using the ideal gas law equation and the approximate volume of the chamber. While the centrifuge is enclosed during operation, the seals in the casing that emit drive rotation are potential sources of fugitive leaks. Additionally, the solids discharge opening is a potential source of fugitive vapor loss. Emissions from these sources were estimated using the TCEQ' Equipment Leak Fugitive Factors (pump seal factors for the casing seals and the open-ended line factor for the solids discharge port). Finally, the solids that accumulate in the open-top hopper are also a potential source of emissions. Potential emissions from oil residue contained in the solids were estimated using an EPA equation for evaporation rate from exposed liquid surfaces. Although not a liquid, the calculations conservatively assume a liquid surface.

TECHNICAL REVIEW: AIR PERMIT BY RULE

DEFICIENT

Permit No.:	86173	*Company Name:*	Port Arthur Chemical & Environmental Services, LLC	*APD Reviewer:*	(b) (6), (b) P.E.
Project No.:	158011	*Unit Name:*	Port Arthur Chemical & Environmental Services	*PBR No(s).:*	106.183, 106.261, 106.472

The company states that the emissions from the loading of oil and wastewater into transport vessels are calculated in accordance with methods specified in AP-42. PACES again states that it has the capability, and retains the option, to utilize vapor balancing to route captured loading loss vapors to the existing facility flare. The loading loss emissions used as the basis for this PBR assume no controlled reduction efficiency.

The company states that fugitive emissions from potential leaks at valves, pumps, and connections associated with this project are calculated using the methods and emission factors specified in the TCEQ document "Air Permit Technical Gu9ance for Chemical Sources: Equipment Leak Fugitives". Although operations personnel may conduct periodic monitoring for leaks that can be detected by visible, audible, or olfactory means, emissions were estimated with no reduction credit for monitoring.

Emissions resulting from the combustion of natural gas or LPG fuel in a 1.2 MMBtu/hr capacity boiler were estimated using AP-42 emission factors for small commercial units.

The company states that the total project potential emissions are 3.78 tpy VOC, 0.52 tpy NOx, 0.43 tpy CO, 0.04 tpy PM10, and 0.003 tpy 802. VOC and NOx emissions are below the level requiring Non-attainment or PSD review.

TECHNICAL SUMMARY - DESCRIBE HOW THE PROJECT MEETS THE RULES

DEFICIENT-

As stated in 106.4 (b), no person shall circumvent the full permit process. You have submitted a permit application for facilities/operations which are already constructed and operating and this process should also be in that action. Additionally as stated in 106.4(c), the emissions from the facility shall comply with all rules and regulations of the commission and with the intent of the TCAA, including protection of health and property of the public, and all emissions control equipment shall be maintained in good condition and operated properly during operation of the facility. The number of complaints, confirmed nuisance conditions, poor compliance history, the unused but relied on control equipment, unregistered emissions, unregistered operations, insufficient supporting information for the emissions claimed, failure to meet certified emission representations and the failure to follow your certified operational representations does not meet 106.4(c).

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http://www.tceq.state.tx.us/assets/public/permitting/air/memos/tank_under_pbr06.pdf

The presence of sulfur at a concentration of over 24 ppmv in the flow steam to the flare triggers a 1/4 mile distance requirement from the flare to the nearest recreational area or residence or other structure not occupied or used solely by the owner or operator. Based upon your represented distance from the flare or tanks to the nearest recreational area or residence or other structure not occupied or used solely by the owner or operator of the property, your PBR claim 86173/140921 and subsequent PBR claims including this claim which rely on the tanks and flare not containing or emitting sulfur compounds, will not meet the PBR requirements and a permit will be required.

COMMUNICATION LOG

Date	Time	Name/Company	Subject of Communication
June 8, 2010	1615	(b) (6), (b) (7) Region 10	Discuss the sampling results.
June 17, 2010	1718	(b) (6), (b) (7) Region 10	Email stating that CES has had an odor complaint this day but was not deemed a nuisance. PACES was unloading a barge into a truck. Discovered that PACES apparently has a new owner, Chemical Recovery Technologies LLC (CRT).
June 23, 2010	0700	TCEQ APIRT (b) (6), (b) 239-1274	Do you have a signed copy of the PI-7-CERT form? My copy is unsigned.
June 23, 2010	0800	(b) (6), (b) (7) Region 10	Discuss the recent odor complaint for which he was the inspector.
June 16, 21, 25, 2010	various	(b) (6), (b) Manager	Conference on deficiencies.
June30, 2010	0900	(b) (6), (b) (7) TCEQ Legal	Sent to legal for their approval before sending.
July 30, 2010	1207	(b) (6), (b) (7) TCEQ Legal	Legal has no objection to the letter or TRV.

PBR Emission Limits

Chemical	PBR Claimed	L, mg/m^3	Emission Limit (E = L/K), lb/hr	Emission Limit tpy	Actual Emissions lb/hr	Actual Emissions tpy
oil	261		1	4.38	0.3071	1.1412

ESTIMATED EMISSIONS

EPN / Emission Source	Specific VOC	VOC	NOx	CO	PM_{10}	$PM_{2.5}$	SO_2	Other

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	or Other Pollutants	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy
OT-1,2,3 / Oil & Water feed storage tanks		0.6212 5.0431 0.6212	0.0380 0.7127 0.0380												
OT-4 / Oil & Water feed storage tank		3.9997	0.6888												
C-1 / Centrifuge		0.0974	0.3675												
OH-1 / 3 cubic yard solids hopper		0.1241	0.5426												
OH-5 / 450 gal oil receiver		0.2837	0.6736												
OH-6 / 450 gal wastewater receiver		0.00026	0.00033												
OLDG / Loading		3.3556	0.4641												
OF-1 / Fugitives		0.0855	0.2301												
/ Boiler		0.0065	0.0283	0.1176	0.5151	0.0988	0.4328	0.0089	0.0392	0.0089	0.0392	0.0007	0.0031		
TOTAL EMISSIONS (TPY):		5.0431	3.785	0.1176	0.5151	0.0988	0.4328	0.0089	0.0392	0.0089	0.0392	0.0007	0.0031		

MAXIMUM OPERATING SCHEDULE:	Hours/Day	24	Days/Week	7	Weeks/Year	52	Hours/Year	8760

SITE REVIEW / DISTANCE LIMIT	Yes	No	Description/Outcome	Date	Reviewed by
Site Review Required?		X			
PBR Distance Limits Met?		X	The company claims 200' exists to the nearest property line and 250' to the nearest receptor. Supporting documentation of these facts is not present in the submittal.	June 23, 2010	(b) (6), (b) P.E.

	TECHNICAL REVIEWER	PEER REVIEWER	FINAL REVIEWER
SIGNATURE:	(b) (6), (b) (7)(C)		See Hard Copy
PRINTED NAME:	(b) (6), P.E.	(b) (6), P.E.	(b) (6), (b) P.E., Manager
DATE:	June 28, 2010	June 29, 2010	~~June 29, 2010~~ July 30 2010

BASIS OF PROJECT POINTS	POINTS
Base Points: 2 PBRs	2.0
Project Complexity Description and Points: *add PBR, complex writeup* Communication (3 conferences with manager, 3 phone calls and email) processing <30 days	0.5 1.0 1.5 0.25
Technical Reviewer Project Points Assessment:	5.25
Final Reviewer Project Points Confirmation:	